Nephrology consults increase

To the Editor: The article by Jain *et al* on 'When laboratories report estimated glomerular filtration rates in addition to serum creatinines, nephrology consults increase" deserves further comment on both the cause and the magnitude of increase in nephrology consultations.[1]

A more rigorous approach would have been to look at secular trends in nephrology consults in other regions that had not implemented routine estimated glomerular filtration rate (eGFR) reporting rather than using dermatology consults as the comparator. Figure 1 shows the new outpatient nephrology consults at Capital Health, Halifax, Nova Scotia, over a similar time period. We provide nephrology consultant service for a relatively stable catchment population of approximately 700,000–800,000 people. Routine reporting or at request eGFR had not been implemented in the province; however, we experienced a similar increase in consultations (27 vs. 24%) at a time similar to the introduction of eGFR in Ontario. The absolute increase, relative to the catchment population, is also comparable. The sudden increase at our center was a response to growing referrals and a desire to reduce wait times, implying that the stimulus was already in place. The increase in demand also predated a reduction in the upper limit of normal for serum creatinine for women by the laboratory, which also appears to have increased the referrals of older women.

Although analyses of administrative databases are convenient they may not accurately assess the magnitude of the impact. Nephrology consults underestimate actual and potential referrals for several reasons. There may be an increase in referrals to general internists for patients in areas geographically remote, wait lists grow, and sometimes we contact referring physicians by phone or letter instructing investigation and treatment of less urgent cases, thereby avoiding the need for a billed consult. Although unsubstantiated, as wait lists grow some primary care physicians simply forgo less urgent referrals. Finally, some of the increase is not low eGFR. There are a small but growing number of nondiabetic patients referred with isolated microalbuminuria.

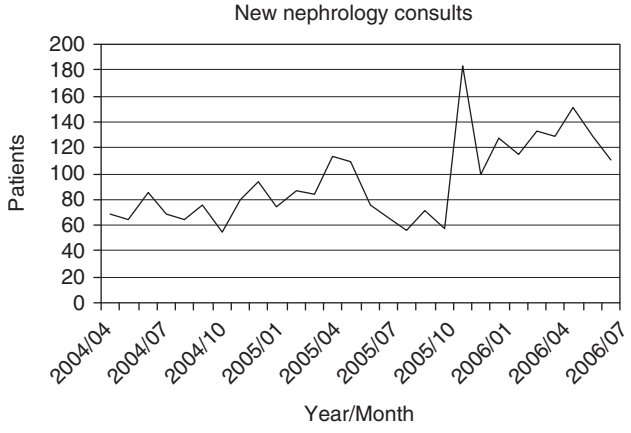

Figure 1 | New nephrology consults.

Reporting that labels someone as having an abnormal lab test (eGFR or creatinine) results in referral without increasing the knowledge of the primary care provider. We have recently seen a decrease in nephrology consults and feel that this may in part be the result of education targeted at the primary practitioner on the evaluation and treatment of chronic kidney disease. Now that Jain *et al.*[1] have demonstrated increase consult rates we must examine the impact on health outcomes and costs for those now being referred. Given staggering increases in health care expenditures we should strive for the evidence that this increased referral (age >70 with eGFR between 45–60 ml/min per 1.73 m^2) has measurable benefit. As an example that the benefits derived may be limited in the older population, the US Preventive Services Task Force now recommends against routine colorectal screening in individuals >75 years of age because of reduced benefits from competing risks of death.[2] Electronic medical records that incorporate decision layer support based on eGFR and increased risk responsive to intervention would be a useful next step.

1. Jain AK, McLeod I, Huo C *et al.* When laboratories report estimated glomerular filtration rates in addition to serum creatinines, nephrology consults increase. *Kidney Int* 2009; **76**: 318–323.
2. Screening for Colorectal Cancer, March 2009. *U.S. Preventive Services Task Force.* Agency for Healthcare Research and Quality: Rockville, MD. http://www.ahrq.gov/clinic/uspstf/uspscolo.htm

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Where are cut-off values of serum creatinine in the setting of chronic kidney disease?

To the Editor: We read with interest the article 'When laboratories report estimated glomerular filtration rates in addition to serum creatinines, nephrology consults increase' by Jain *et al.*[1] However, we thought it would be fair for them to give a chance for serum creatinine (Scr) levels to change before they simply say that Scr may remain normal or only mildly elevated in the setting of chronic kidney disease (CKD).

The optimal cut-off values of Scr according to CKD stage were calculated for 253 patients who were over 18 years of age, using the receiver operating characteristic curves[2] that

Table 1 | Number of patients in CKD stage according to the values of eGFR and Scr cut-off

	eGFR (ml/min per 1.73 m^2)		Scr (mg/dl)	
CKD stage	Cut-off	No. (%)	Cut-off	No. (%)
1	⩾90	5156 (37.1)	⩽0.7	5767 (41.5)
2	60–89	6990 (50.3)	0.8–1.0	6159 (44.3)
3	30–59	1360 (9.78)	1.1–1.6	1505 (10.8)
4	15–29	172 (1.24)	1.7–2.5	196 (1.41)
5	<15	227 (1.62)	>2.5	278 (1.99)
		13,905 (100)		13,905 (100)

Abbreviations: CKD, chronic kidney disease; eGFR, estimated glomerular filtration rate; Scr, serum creatinine.

were formed by creatinine clearance measured from 24 h urine (Table 1). For 13,905 patients who were over 18 years of age, the number of patients from cut-off values of Scr and estimated glomerular filtration rate (eGFR) formula at each CKD stage were compared. The four-variable Modification of Diet in Renal Disease Study equation using Japanese race factor was applied for eGFR.[3]

The number of patients per CKD stage, which was classified using the newly established Scr cut-off values, showed very similar results to the number of patients classified using eGFR cut-off values (Table 1). In conclusion, setting the cut-off values would be necessary when applying Scr to CKD.

1. Jain AK, McLeod I, Huo C *et al.* When laboratories report estimated glomerular filtration rates in addition to serum creatinines, nephrology consults increase. *Kidney Int* 2009; **76**: 318–323.
2. Tripepi G, Jager KJ, Dekker FW *et al.* Diagnostic methods 2: receiver operating characteristic (ROC) curves. *Kidney Int* 2009; **76**: 252–256.
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Nephroprevention in acute phosphate nephropathy

To the Editor: We read the article by Markowitz and Perazella,[1] who masterfully show us the actuality of acute phosphate nephropathy, this is probably a not uncommon cause of kidney injury.

Lien[2] previously referred to possible strategies to prevent the side effects of phosphate overload, so we could establish a preventive strategy:

(1) Avoid use in high-risk patients.[1,2] (2) Use the minimal effective dose,[3] the total amount of phosphate excreted in the urine after the second dose is threefold to fourfold to that excreted after the first dose; this suggests that the second dose is particularly dangerous,[4] so a reduction or replacement with another agent (magnesium citrate or low-volume polyethylene glycol) would be possible. (3) Increase the interval between doses; a 24 h interval reduces the incidence of clinically relevant hyperphosphatemia, with no loss of efficacy compared with an interval of 9–12 h.[3] (4) Avoid dehydration;[1,2] clear fluid should be administered; in some centers Gatorade or E-lyte is recommended (possibly a superior alternative). Furthermore, monitoring of body weight and urine color is useful to guide fluid intake. During the procedure an intravenous line is routinely placed and normal saline could be given during and after the procedure. (5) Perform serum biochemistry tests before colonoscopy and measure the renal function and baseline electrolytes; in high-risk or unstable patients a control 2 or 3 days after would be necessary. (6) Finally, consider an alternative bowel-cleansing agent.

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Cognitive-behavioral group therapy is an effective treatment for major depression in hemodialysis (HD) patients

To the Editor: We read with great interest the article by Duarte *et al.*[1] evaluating a randomized trial on cognitive-behavioral group therapy (CBT) for major depression in hemodialysis (HD) patients. In this study group, receiving CBT had significant improvements, compared with the control group, in the average scores on the Beck Depression Inventory and Mini-International Psychiatric Interview, and in several Kidney Disease Quality of Life-Short Form (KDQOL-SF) dimensions up to 9 months. We would like to raise two issues. The authors addressed most of the clinical characteristics that could affect depression in HD patients, with the exception of one: chronic pain. Chronic pain is a significant problem for ~50% of HD patients. The impact of chronic pain on